

Application No.: 10/805,224

Docket No.: 21854-00019-US1

**AMENDMENTS TO THE CLAIMS**

This listing of the claims will replace all prior versions and listings of the claims in this application.

**Listing of the Claims:**

## Claims 1-10 (Canceled)

11. (Currently amended) A biodegradable polymer ~~adapted to thermoform rigid packaging products, said polymer~~ composition consisting essentially of the following in percent by weight:

- a) 8 to 80% of a starch modified to include a hydroxyalkyl C<sub>2-6</sub> group or modified by reaction with an anhydride of a carboxylic acid,
- b) 4 to 11% of a water soluble polymer selected from polyvinylacetate, ~~and~~ polyvinyl alcohol or a mixture thereof,
- c) up to 12% added water,
- d) 0 to 10% of a polyol plasticizer,
- e) 0.1 to 1.5% of a C<sub>12-22</sub> fatty acid or salt,
- f) the balance being a natural starch.

12. (Currently amended) A biodegradable polymer as claimed in claim 11 wherein component e) comprises stearic acid or a salt thereof.

13. (Currently amended) A biodegradable polymer as claimed in claim 11 wherein component b) comprises a polyvinyl alcohol ~~component~~.

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14. (Previously presented) A biodegradable polymer as claimed in claim 11 wherein the polyol plasticizer comprises glycerol.

15. (Previously presented) A biodegradable polymer as claimed in claim 11 wherein the polyol plasticizer content is zero and added water is from 10 to 12%.

16. (Currently amended) A biodegradable polymer as claimed in claim 20 ~~further comprising~~ wherein the fatty acid is stearic acid or a salt thereof.

17. (Previously presented) A biodegradable polymer as claimed in claim 21 comprising polyvinyl alcohol.

18. (Withdrawn) A process for forming a biodegradable polymer according to claim 11 comprising:

a) forming a mixture of starch, a modified starch, a water soluble polymer or copolymer containing vinyl alcohols units, up to 20% of added water and a polyol plasticizer and 0.4 to 1.5% by weight of a C<sub>12-22</sub> fatty acid or salt;

b) working the mixture and forming a melt within the temperature range of 130°C to 160°C, and

c) reducing the temperature and further working the mixture and then extruding the mixture or injecting the mixture into a mold at a temperature of 85°C to 105°C without the need to remove water.

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19. (Withdrawn) A process for forming products as claimed in claim 18 wherein the polymer is extruded into a sheet and subsequently thermoformed into a packaging tray.

20. (Currently amended) A biodegradable polymer suitable for use in thermoforming rigid packaging products, said polymer consisting essentially of the following in percent by weight: a) 8-80% starch modified to include a hydroxyalkyl C<sub>2-6</sub> group or modified by reaction with an anhydride of a carboxylic acid; b) 4-11% of a water soluble polymer comprising polyvinylacetate, ~~and/or~~ polyvinyl alcohol or a mixture thereof; c) up to 12% added water; d) ~~0 to 10% of a polyol plasticizer~~ 0.4 to 1.2% of a C<sub>12-22</sub> fatty acid or salt.

21. (Currently amended) A biodegradable polymer as claimed in claim 20, ~~wherein d is substantially 0% further comprising e)~~ 0-8.7% of a polyol plasticizer.

22. (Previously presented) A polymer composition that has been adapted to form a film, said polymer composition consisting essentially of in percent by weight:

a) 8 to 80% of a starch modified to include a hydroxyalkyl C<sub>2-6</sub> group or modified by reaction with an anhydride of a carboxylic acid

b) 4 to 11% of a water soluble polymer selected from polyvinyl acetate, polyvinyl alcohol and copolymers of ethylene and vinyl alcohol

c) 10 to 16% of a polyol plasticizer

d) up to 12% added water

e) 0.1 to 1.5% of a C<sub>12-22</sub> fatty acid or salt

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f) the balance being a natural starch.

23. (Previously presented) A composition as claimed in claim 22 wherein component e) comprises stearic acid.

24. (Previously presented) A composition as claimed in claim 22 wherein component b) comprises a polyvinyl alcohol .

25. (Previously presented) A composition as claimed in claim 23 wherein component b) comprises a polyvinyl alcohol .

26. (New) A biodegradable polymer as claimed in claim 11 wherein the polyol plasticizer is present from 2.9% to 8.7%.

27. (New) A composition as claimed in claim 21 wherein the polyol plasticizer is present from 2.9% to 8.7%.

28. (New) The biodegradable polymer of claim 11 wherein the composition is formed into a container.

29. (New) The biodegradable polymer of claim 28 wherein the container is rigid.

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30. (New) The biodegradable polymer of claim 28 wherein the container is a sealed container.
31. (New) The biodegradable polymer of claim 28 wherein the container encloses a product.
32. (New) The biodegradable polymer of claim 29 wherein the rigid container encloses a product.
33. (New) The biodegradable polymer of claim 30 wherein the sealed container encloses a product.
34. (New) The biodegradable polymer of claim 28 wherein the container is a tray.
35. (New) The biodegradable polymer of claim 32 wherein the tray contains a product.
36. (New) The biodegradable polymer of claim 11 wherein the composition is formed into a film.
37. (New) The biodegradable polymer of claim 34 wherein the film is flexible.

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38. (New) The biodegradable polymer of claim 35 wherein the film encloses a product.
39. (New) The biodegradable polymer of claim 34 wherein the film is formed into a container.
40. (New) The biodegradable polymer of claim 37 wherein the container is rigid.
41. (New) The biodegradable polymer of claim 37 wherein the container is a sealed container.
42. (New) The biodegradable polymer of claim 37 wherein the container encloses a product.
43. (New) The biodegradable polymer of claim 38 wherein the rigid container encloses a product.
44. (New) The biodegradable polymer of claim 39 wherein the sealed container encloses a product.
45. (New) The biodegradable polymer of claim 37 wherein the container is a tray.
46. (New) The biodegradable polymer of claim 41 wherein the tray contains a product.

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47. (New) A packaged product comprising a product enclosed in a container formed from the biodegradable polymer claimed in claim 11.
48. (New) A packaged product comprising a product enclosed in a container formed from the polymer composition claimed in claim 22.
49. (New) A packaged product comprising a product enclosed in a film formed from the biodegradable polymer claimed in claim 11.
50. (New) A packaged product comprising a product enclosed in a film formed from the polymer composition claimed in claim 22.
51. (New) A packaging tray formed from the biodegradable polymer as claimed in claim 11.
52. (New) A packaging film formed from the biodegradable polymer as claimed in claim 11.
53. (New) A packaging container formed from the biodegradable polymer as claimed in claim 11.